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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

LOPEZ, FRANK D

ART UNIT

PAPER NUMBER

3745

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/578,350	Applicant(s) HIRAMATSU ET AL.	
	Examiner F. Daniel Lopez	Art Unit 3745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-15 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) 1-5 and 9-15 is/are rejected.
- 7) ☐ Claim(s) 6-8 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☒ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/5/06</u> . | 6) <input type="checkbox"/> Other: ____. |

Priority

Acknowledgment is made of applicant's claim for foreign priority based on a PCT application, and an application filed in Japan on November 10, 2003. A copy of the PCT showing that the US is a designated state and that it claims priority to the above application (usually the front page of the published PCT application) must be filed to perfect the priority claim.

Claim Rejections - 35 USC § 112

Claim 13 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 13 line 4-5 "of the pressure control signal from the host computer, only a signal of a corresponding address is processed by the control part" contradicts claim 9. Claim 9 claims that "the control part controls the fluid regulator based on a pressure control signal...and a detection signal", which indicates that the control part processes another part of the pressure control signal, to generate the signal to control the regulator.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 2 are rejected under 35 U.S.C. § 102(b) as being anticipated by Kleinwaks.

Claims 1 and 3 are rejected under 35 U.S.C. § 102(b) as anticipated Feygin.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

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A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Claims 3-5 are rejected under 35 U.S.C. § 103 as being unpatentable over Kleinwaks in view of Reininger. Kleinwaks discloses a fluid pressure actuator comprising a control part (26, 42) generating a command signal (from 42), based on detection signals from pressure (46) and position (30) sensors and on a pressure control signal (via 34), for controlling a fluid regulator (24), by adjusting a pressure of fluid supplied to and discharged from an actuator body (10); wherein the pressure sensor is mounted in the actuator body; and wherein the actuator body expands and contracts with the adjustment of the pressure; but does not disclose that the position sensor is mounted in the actuator body and includes a length measurement spring connected between the actuator body and a sensor body; wherein the sensor body detects a change in tensile force due to the length measurement spring.

Reininger teaches, for a fluid pressure actuator comprising a actuator body (10) which expands and contracts with adjustment of pressure therein; and a position sensor (30); that the position sensor is mounted in the actuator body and includes a length measurement spring connected between the actuator body (at 12) and a sensor body (31); wherein the sensor body detects a change in tensile force due to the length measurement spring (by measuring strain).

Since Kleinwaks discloses not disclose details of the position sensor and Reininger does; it would have been obvious at the time the invention was made to one having ordinary skill in the art to mount the position sensor of Kleinwaks in the actuator body and include a length measurement spring connected between the actuator body

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and a sensor body; wherein the sensor body detects a change in tensile force due to the length measurement spring, as taught by Reininger, since one having ordinary skill in the art would have been able to carry out such a substitution and the resulting combination would predictable work in the same manner

Claims 9, 10 and 12-15, inasmuch as they are definite, are rejected under 35 U.S.C. § 103 as being unpatentable over Kleinwaks, as applied to claims 1-2 above, or Kleinwaks in view of Reininger, as applied to claims 3-5 above, and further in view of Nappi et al. The modified Kleinwaks discloses all of the elements of claims 9, 10, 12, 14 and 15, including that the pressure control signal is received via an I/O port, from another element (via 34); but does not disclose that the other element is a host computer; that the control part has storage means storing a program for communicating with the host computer and specific addresses; or that the control part is provided on the fluid regulator.

Nappi et al teaches, for a fluid pressure actuator comprising a control part (26, 42) generating a command signal (from 52), based on a pressure control signal (via 34), for controlling a fluid regulator (16, 18), by adjusting a pressure of fluid supplied to and discharged from an actuator body (10); wherein the actuator body expands and contracts with the adjustment of the pressure; that the other element is a host computer (PR); that the control part has storage means (in 40) storing a program for communicating with the host computer and specific addresses; or that the control part is provided on the fluid regulator (see fig 1).

Since the configuration of control part, actuator and regulator of Kleinwaks and Nappi et al are interchangeable in the fluid actuator art, it would have been obvious at the time the invention was made to one having ordinary skill in the art to make the other element of the modified Kleinwaks a host computer; make the control part with storage means storing a program for communicating with the host computer and specific addresses; and provide the control part on the fluid regulator, as taught by Nappi et al, since one having ordinary skill in the art would have been able to carry out such changes and the resulting combination would predictable work in the same manner

Claims 9-11 are rejected under 35 U.S.C. § 103 as being unpatentable over Kleinwaks, as applied to claims 1-2 above, or Kleinwaks in view of Reininger, as applied to claims 3-5 above, and further in view of Nappi et al and Edwards et al. The modified Kleinwaks discloses all of the elements of claims 9-11, including that the pressure control signal is generated by an analog processing means (26, 42); but does not disclose that the other element is a host computer; that the processing means is a CPU, that the control part has an A/D converter for converting the detection signal from the sensor and inputting the converted signal to the CPU, and a D/A converter converting the command signal and outputting the converted signal to the regulator.

Nappi et al teaches, for a fluid pressure actuator comprising a control part (26, 42), including an analog processing means (44) generating a command signal (from 52), based on a pressure control signal (via 34), for controlling a fluid regulator (16, 18), by adjusting a pressure of fluid supplied to and discharged from an actuator body (10); wherein the actuator body expands and contracts with the adjustment of the pressure; that the other element is a host computer (PR); that the control part has storage means (in 40) storing specific addresses and a program for communicating with the host computer, by a common bus (CB).

Edwards et al teaches, for a fluid pressure actuator comprising a control part (30B), including a processing means (70) generating a command signal (to 76), based on a pressure control signal from a host computer (42) via a common bus (44), for controlling a fluid regulator (30C); that the processing means is a digital CPU.

, that the control part has an A/D converter for converting the detection signal from the sensor and inputting the converted signal to the CPU, and a D/A converter converting the command signal and outputting the converted signal to the regulator.

Since the control parts of Kleinwaks, Nappi et al and Edwards et al are interchangeable in the fluid actuator art, it would have been obvious at the time the invention was made to one having ordinary skill in the art to make the processing means of the modified Kleinwaks a digital CPU, as taught by Nappi et al Edwards et al, since one having ordinary skill in the art would have been able to carry out such a substitution and the resulting combination would predictable work in the same manner

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When the processing means is digital and the sensors and regulator are analog, there must be an A/D converter for converting the detection signal from the sensors and inputting the converted signal to the CPU, and a D/A converter converting the command signal and outputting the converted signal to the regulator, for the purpose of converting the signal generated by one system into a signal that can be understood by the other system. Therefore, it would have been obvious at the time the invention was made to one having ordinary skill in the art to include in the control part, of the modified Kleinwaks, an A/D converter for converting the detection signal from the sensor and inputting the converted signal to the CPU, and a D/A converter converting the command signal and outputting the converted signal to the regulator, for the purpose of converting the signal generated by one system into a signal that can be understood by the other system..

Conclusion

Claims 6-8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan Lopez whose telephone number is 571-272-4821. The examiner can normally be reached on Monday-Thursday from 6:00 AM -4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Look, can be reached on 571-272-4820. The fax number for this group is 571-273-8300. Any inquiry of a general nature should be directed to the Help Desk, whose telephone number is 1-800-PTO-9199.

/F. Daniel Lopez/

F. Daniel Lopez
Primary Examiner
Art Unit 3745
October 9, 2008